XR-LASER GREEN

User's Manual Rel 1.2 **GB**

D.T.S. Illuminazione srl - ITALY
http://www.dts-lighting.it

DTS
The Lighting Company

Made in Italy

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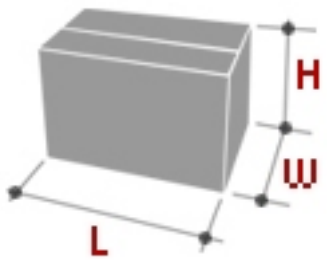
1- TECHNICAL FEATURES

The XR-LASER GREEN is fitted with a 300 mW DSPP green color laser
Average laser lifespan is 8000 hours.
The unit incorporates:
Electronic Zoom system (4°-28°)
Dimmer (emitted light is controlled by progressive and linear dimming).
Strobe: Electronic strobe effect (frequency variable from 0.85 flashes/sec to 10 flashes/sec).
Prism (electronic indexable multistep prism rotating in both directions).
Pan: 540° in 2.8 seconds (8 or 16 bit) with auto repositioning system.
Tilt: 270° in 2.0 seconds (8 or 16 bit) with auto repositioning system.
USITT Standard DMX 512 input signal.
11 or 18 DMX channels.
4 -eight digit- LED display with 4 buttons.
4 XLR connectors (In and Out) with 3 and 5 pins.
SD card input socket (Graphics media)
USB connector (Software upgrade)

Power supply
Universal power supply 90-260V AC (50/60 Hz).
Power consumption: 150 W
Operating ambient temperature: 10° / 40°C
Weight: 16 Kg

Laser specifications
Output Power: 300 mW
Output wavelenght: 532 nm
Beam mode: TEM_{00}
Power stability: <5% (over 2 hours)
Beam divergence: <1.2mrad
Beam diameter: <1.5mm
Warmup time: <15 minutes

Dimensions (LxWxH)
projector (426x415x610mm)



Packaging Dimensions (LxWxH)
550 x 440 x 800 mm
Weight
21 Kg

2- IMPORTANT SAFETY INFORMATION

2.1 Fire prevention:

XR-LASER GREEN is fitted with a 300 mW DSPP green color laser .
-Minimum distance from flammable materials: 1 MT.
-Minimum distance from the closest illuminable surface: 2 MT.
-Replace any blown or damaged fuses only with those of identical value. Refer to the wiring diagram if there is any doubt.
-Connect the projector to mains power via a thermal magnetic circuit breaker.

2.2 Prevention of electric shock:

-High voltage is present inside the unit. Unplug the unit prior to performing any function which involves touching the inside of the moving head.
-The level of technology inherent in the XR-LASER GREEN requires the assistance of specialised personnel for all servicing.Please refer to an authorised DTS service centre.
-A good earth connection is essential for proper functioning of the projector.
-Never connect the unit without proper earth connection.
-The fixture should be located in places with a good air ventilation.

2.3 Protection against direct exposure to laser beam:

-NO PERSON OTHER THAN A THROUGLY TRAINED OPERATOR SHOULD BE ALLOWED TO USE THE LASER UNIT OR DIRECT OR MANIPULATE THE OUTPUT BEAM.
-Never turn on the unit if any of the lenses, filters or ABS covering is damaged. Their respective shielding functions will only operate efficiently if they are in perfect working order.
-A laser is an electronic-optical device that emits coherent light radiation,in a narrow, low-divergence monochromatic beam with a well-defined wavelength. In this respect, laser light is in sharp contrast with such light sources as the incandescent light bulb, which emits light over a wide area and over a wide spectrum of wavelengths.

Class 3B laser

A Class 3B laser is hazardous if the eye is exposed directly.Lasers in this category can cause permanent eye damage with exposures of 1/100th of a second or less depending on the strength of the laser.Diffuse reflections such as from paper or other matte surfaces are not harmful.Protective eyewear is typically required where direct viewing of a class 3B laser beam may occur.
Protective eyewear in the form of spectacles or goggles with appropriately filtering optics can protect the eyes from the reflected or scattered laser light with a hazardous beam power, as well as from direct exposure to a laser beam. Eyewear must be selected for the specific type of laser, to block or attenuate in the appropriate wavelength range.In addition to an optical density sufficient to reduce beam power to below the maximum permissible exposure, laser eyewear used where direct beam exposure is possible should be able to withstand a direct hit from the laser beam without breaking.**In an environment with potential exposure to laser beams, suitable eye protection is recommended for beams of Class 3B and Class 4.**In the U.S., guidance for the use of protective eyewear, and other elements of safe laser use, is given in the ANSI Z136 series of standards. In the European Community, eye protection requirements are specified in European norm EN 207.

2.4 Safety:

-The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.
-Always use a second safety cable to sustain the weight of the unit in case of the failure of the main fixing point.
-Never install the fixture in an enclosed area lacking sufficient air flow. The ambient temperature should not exceed 40°C.

2.5 Level of protection against the penetration of solid and liquid objects:

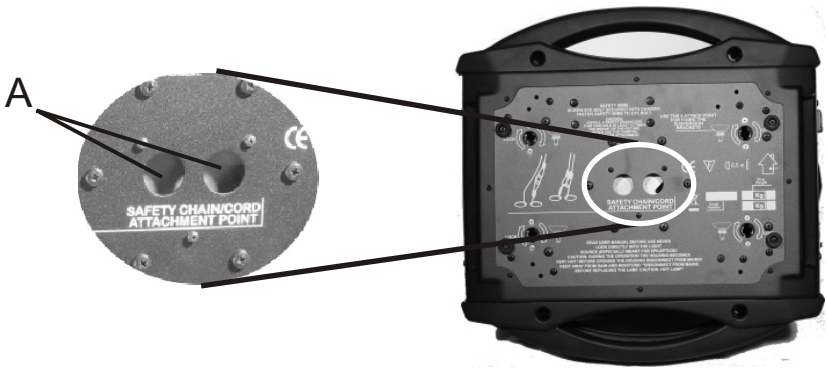
-The projector is classified as an ordinary appliance and its protection level against the penetration of solid and liquid objects is IP 20.

3- **VOLTAGE AND FREQUENCY**

The XR-LASER GREEN can operate at 90-260 VOLT AC 50-60 Hz.

4- **INSTALLATION**

XR-LASER GREEN may be either floor or ceiling mounted.
For floor mounting installations, the XR-LASER GREEN is supplied with four rubber mounting feet under the base.
For ceiling mounted installations, we reccomend the use of appropriate clamps to fix the unit to the mounting surface.
The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hang it. The structure should also be sufficiently rigid so as not to move or shake whilst the unit is moving.
Four quarter turn fast locks placed on the base, allow to fix the unit in any position, by using the two fast lock C clamps provided in the box.



4.1- Safety cable

We recommend the use of a safety cable or chain connected to the XR-LASER GREEN and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail. Make sure that the iron cable or chain can bear the weight of the entire unit.
You may attach the safety chain to the two holes (A) located on the base of the fixture, as shown in the picture above.

4.2- Protection against liquids

The projector contains electric and electronic components which should under no circumstances come into contact with oil, water or any other liquid. The proper unit functioning would be compromised should this occur.

4.3- Movement

The projector has a maximum movement of 540° for Pan and 270° for Tilt. DO NOT place any obstructions in the path of the projector's movement.

4.4- Risk of fire

Each fixture produces heat and must be installed in a well-ventilated place. The minimum recommended distance from flammable material is 1 MT.
Minimum distance from the object being illuminated is 2 MT.

4.5- Forced ventilation

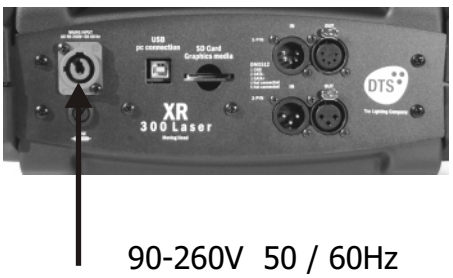
You will note, on inspection, that the unit features various air inlets and cooling fans located on both the base and head of the fixture. These should, under no circumstances, be blocked or obstructed whilst the projector is in operation.
Doing so could cause the fixture to seriously overheat thereby compromising its proper operation.

4.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow. The ambient temperature should NOT exceed 40°C.

5- MAINS CONNECTION

XR-LASER GREEN operates at 90-260 VOLT AC 50-60 Hz.
Prior to connecting the unit to your mains supply,
ensure that the model in your possession correctly matches
the mains supply available. For connection purposes,
ensure that your plug is capable of supporting 3,15 amps at 230V
or 6 amps at 110V.
Strict adherence to regulatory norms is strongly recommended.



90-260V 50 / 60Hz

5.1- Protection

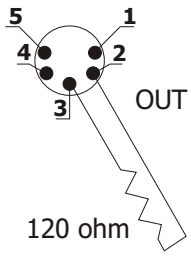
The use of a thermal magnetic circuit breaker is recommended for each XR300 Laser.
A good earth connection is essential for the correct operation of the projector.

6- DMX SIGNAL CONNECTION

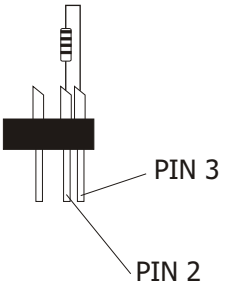
The unit operates using the digital DMX 512 (1990) signal. Connection between the mixer and the projector or between projectors must be carried out using a two pair screened ø 0.5 mm cable and a CANNON XLR 5 or 3 pins connector.
Ensure that the conductors do not touch each other.Do not connect the cable ground to the XLR chassy
The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.
This way, all the projectors are cascade connected.
NB. If the display showing the DMX address flashes, then one of the following errors has occurred:

- DMX signal not present
- DMX address not valid
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor
Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



6.1-DMX Addresses

XR-LASER GREEN can be used in two different modes: 11 or 18 DMX (default) channels.

If you want to use the XR300 Laser in 11 channels mode, select the 11 CH mode from the MODE menu and set the following addresses on the mixer:

Projector 1 A001
Projector 2 A011 If you want to select the next projector, just add "11"

Projector 3 A023
….. A….
projector 6 A056

If you want to use the XR 300 Laser in 18 channels mode, select the 18 CH mode from the MODE menu and set the following addresses:

Projector 1 A001
Projector 2 A019 If you want to select the next projector, just add "18"

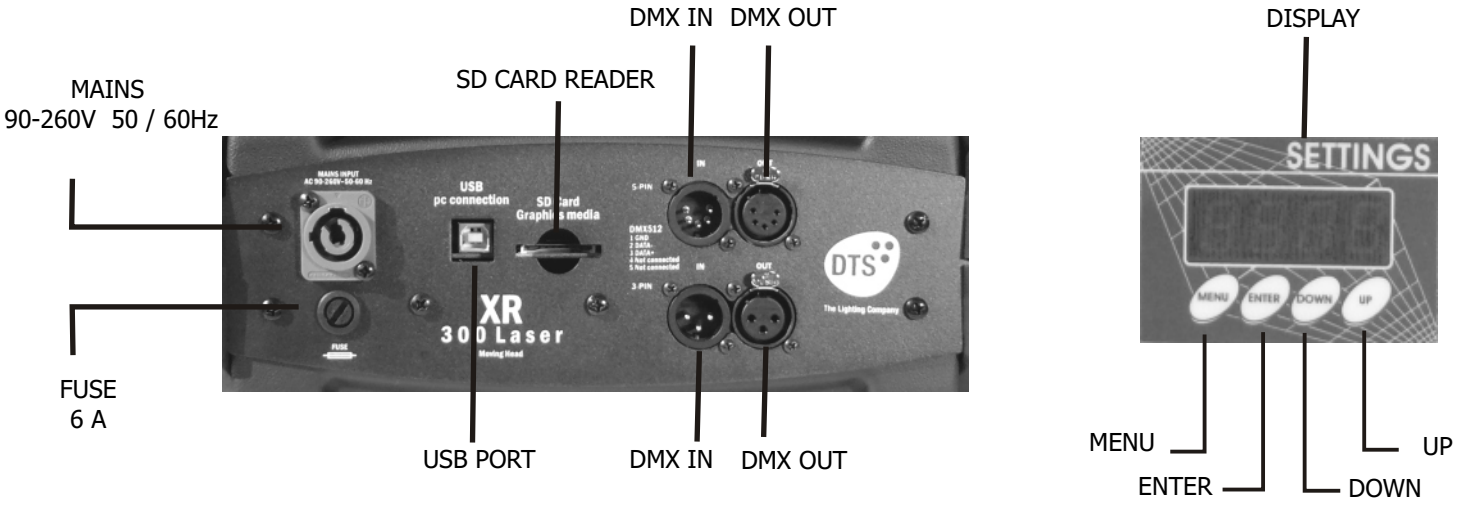
Projector 3 A037
….. A….
Projector 6 A091

6.2-Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX channel. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now set to the new DMX address.

TRICKS:
if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

7- DISPLAY FUNCTIONS



DISPLAY FUNCTIONS

The XR-LASER GREEN display panel shows all the available functions . Using these functions, it is possible to change some of the parameters on the unit. Changing the DTS settings can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.
NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

A001 — MENU — Up-Down — **Pdir** — ENTER — Up-Down — **CU** Clockwise — ENTER

PAN MOVEMENT INVERSION
To reverse Pan movement from left to right and vice versa

Up-Down — **CCU** Counterclockwise — ENTER

MENU — Up-Down — **tdir** — ENTER — Up-Down — **CU** Clockwise — ENTER

TILT MOVEMENT INVERSION
To reverse Tilt movement from bottom upwards and vice versa

Up-Down — **CCU** Counterclockwise — ENTER

MENU — Up-Down — **dISP** — ENTER — Up-Down — **POSI** — ENTER — Up-Down — **AA** Floor position — ENTER

bb Suspension position — ENTER

REVERSE DISPLAY
To Reverse display's reading depending on the mounting position
(On the ground or suspended).

Up-Down — **StbY** — ENTER — Up-Down — **oFF** Display OFF — ENTER

on Display always ON — ENTER

DISPLAY STAND BY
To turn off the display (after 5 seconds)
Or leave it always on.

MENU — Up-Down — **MOdE** — ENTER — Up-Down — **18CH** 18 CHANNELS (Pan & Tilt 16 bit) — ENTER (DEFAULT)

11CH 11 CHANNELS (Pan & Tilt 16 bit) — ENTER

DMX MODE
To select DMX mode : 18 or 11 channels

7- DISPLAY FUNCTIONS

MENU Up-Down → tESt → ENTER → tESt → ENTER

TEST MODE
Pan&Tilt test with no laser output.

This test is usefull for testing pan and tilt movements.
Laser output is kept OFF for safety reason,doing the fact that during test, Pan and Tilt can reach undesidered positions.

MENU Up-Down → AUtO → ENTER → SUrE → ENTER

AUTOMATIC MODE
Automatic demo games

Not yet implemented

MENU Up-Down → rESE → ENTER Up-Down → En → RESET ENABLED VIA DMX → ENTER
→ dS → RESET DISABLED VIA DMX → ENTER
→ rESE → TOTAL RESET → ENTER

RESET
Total unit reset

MENU Up-Down → dFSE → ENTER → SUrE → ENTER

DEFAULT
To restore default setting

MENU Up-Down → SOFt → ENTER → 10.10

Pan & Tilt software / Laser software

SOFTWARE
Pan & Tilt and Laser software
Versions

MENU Up-Down → FAnS → ENTER Up-Down → 1 → ENTER
→ 12 → ENTER (DEFAULT : 12)

FANS control
To control the fans speed

MENU Up-Down → SPEE → ENTER Up-Down → 1 → ENTER
→ 4 → ENTER (DEFAULT : 2)

SPEED control
Pan & Tilt Speed control.

MENU Up-Down → rEC → ENTER Up-Down → 18CH → ENTER
→ 11CH → ENTER

Not yet implemented

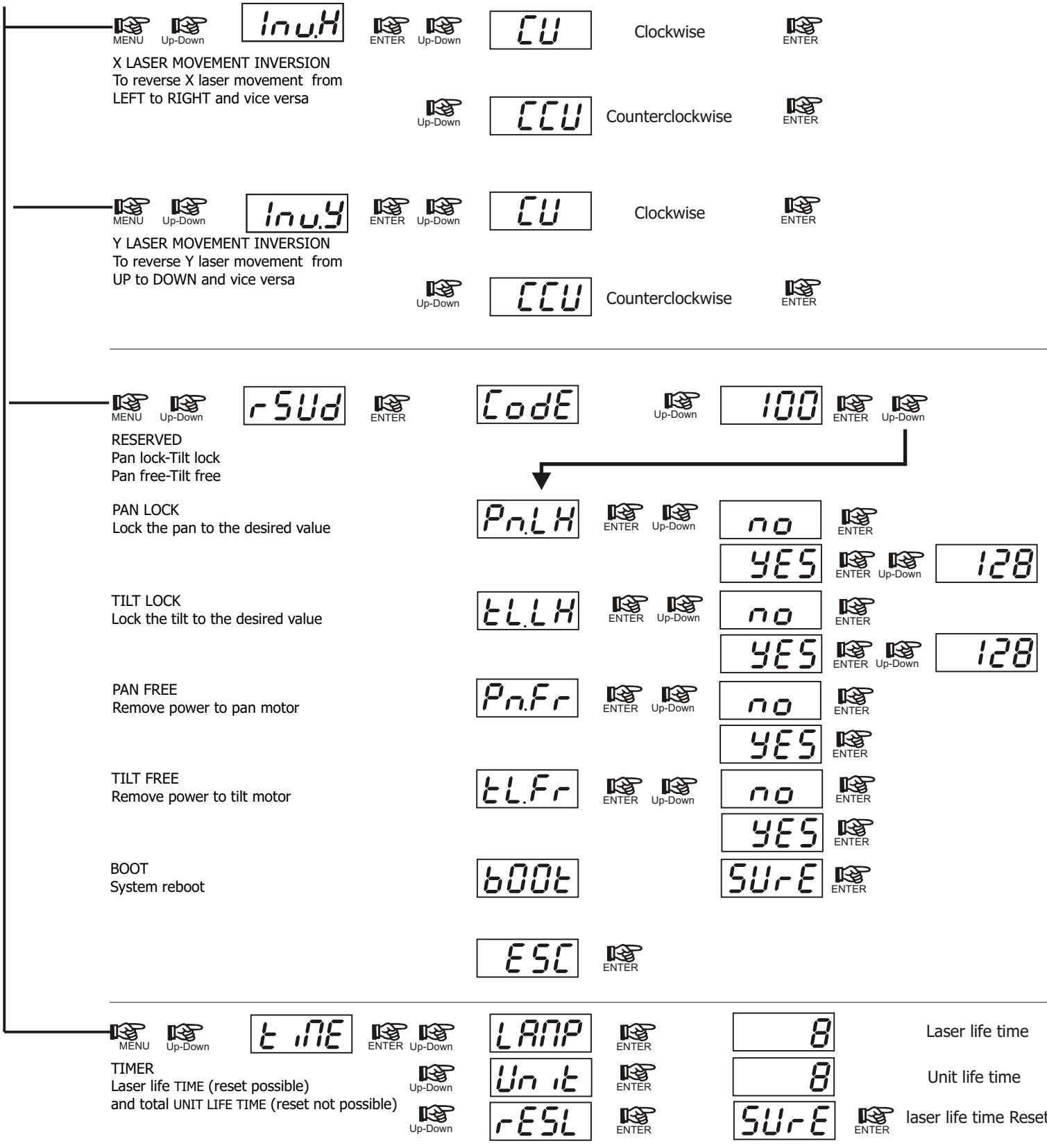
RECORDING mode
Let you create or modify your own GAM.P

MENU Up-Down → SLAU → ENTER → SUrE → ENTER Up-Down → SLU
→ ESC

Not yet implemented

Slave mode
Slave mode as run by GAM.P, Synchronised with master

7- DISPLAY FUNCTIONS



8- PAN & TILT SPEED (SPEE) (default: 2)

You can set the PAN and TILT motors at high speed on your XR-LASER GREEN.
Press menu and scroll with UP-DOWN buttons till SPEE menu.
Press ENTER and select the desired speed (there are 4 speeds), confirming with ENTER.
When you use speed 4 (the highest) PAN and TILT speed is very high and your projector may loose its path. In this case, the encoder correct the position.
During position correction, the unit will goes in blackout.

9- FAN SPEED (FANS)(default: 12)

Fan speed regulation makes it possible to reduce fan noise. However, the ambient temperature must be less than 35° C.

10- ERROR MESSAGES

OPEr — **ERROR: ENCODER PAN**

OtEr — **ERROR: ENCODER TILT**

11- HIDDEN MENU

For technical personnel only.

To operate this menu:

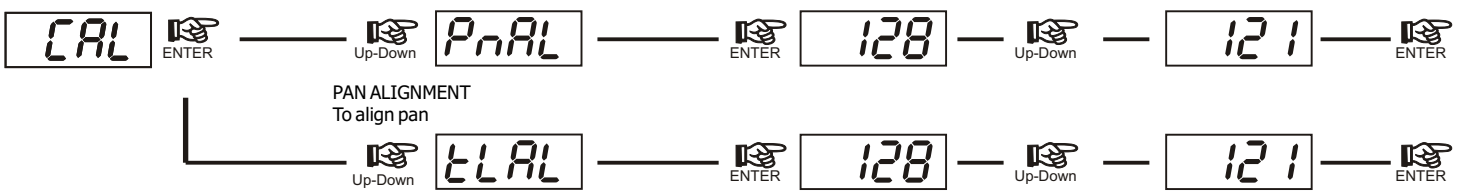
-Connect the projector to the DMX controller (DMX SIGNAL MUST BE CORRECTLY RECEIVED)

- Reset the unit (reset from the MENU, not from the DMX controller!).
- While reset is running, press the MENU and ENTER keys at the same time.

CAL Electronic calibration of the motors.

rESn Reset EEPROM (Reset all settings. ATTENTION: by pressing this key you must repeat all previous calibrations)

ESC Exit from hidden menu.



12- OPENING THE PROJECTOR HOUSING

It is possible to inspect the inside of the projector by removing the cover as indicated below.

ATTENTION

REMOVE MAINS POWER PRIOR TO ACCESSING THE PROJECTOR'S INTERNAL COMPONENTS.

1) Loosen the 3 screws which fix the head covers (photo 1) .
2) Once unscrewed, simply lift the covers to access the internal components (photo 2).

Photo 1

Photo 2

13- PERIODIC CLEANING

13.1 Glass in front of the Laser beam

ATTENTION

REMOVE MAINS POWER PRIOR TO PERFORMING THE GLASS CLEANING

Even a fine layer of dust can reduce the luminous output substantially. Regularly clean the front glass using a soft cotton cloth, dampened with a specialist glass cleaning solution.

13.2 Fans and air passages

The fans and air passages must be cleaned approximately every 6 weeks. This periodic cleaning will depend on the conditions in which the projector operates. Suitable instruments for performing this type of maintenance are a brush and a common vacuum cleaner or an air compressor. If necessary, clean the fans and air passages more frequently.

14- PERIODIC CONTROLS

ATTENTION

DISCONNECT MAINS POWER PRIOR TO REMOVING THE PROJECTOR HOUSING

Mechanical parts

Periodically check all mechanical parts,gears, guides, belts, etc.for wear and tear, replacing them if necessary. Periodically check the lubrication of all components, particularly the parts subject to high temperatures. If necessary, lubricate with suitable lubricant, available from your D.T.S. distributor. Check the tension of the belts and adjust it if necessary.

Electrical components

Check all electrical components for correct earthing and proper connection of all connectors, refastening if necessary.

Fuse replacement

Locate the fuse, which protects the lamp and electronics, in the base of the XR300 Laser
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary..

15- DMX PROTOCOL

11 CHANNELS MODE

1 PAN msb 540°
2 PAN lsb
3 TILT msb 270°
4 TILT lsb
5 SPEED MOVEMENT
6 DIMMER
7 SHUTTER
8 ZOOM
9 BANK
10 INDEX
11 RESET

DMX CHANNEL	1	Parameter: **PAN msb**

DMX CHANNEL	2	Parameter: **PAN lsb**

DMX CHANNEL	3	Parameter: **TILT msb**

DMX CHANNEL	4	Parameter: **TILT lsb**

DMX CHANNEL	5	Parameter: **SPEED MOVEMENT**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-25	**18**				**Fast movement**
26-127					**Vector mode from fast to slow**
128-247					**Variable time reaction to DMX signal (fast to slow)**
248-255	**251**				**Slow reaction time to DMX signal**

DMX CHANNEL	6	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	7	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**Black-out**
10-23					**Open**
24-107					**Strobe from Slow to Fast**
108-163					**Pulse open fron Slow to Fast**
164-219					**Pulse closed fron Slow to Fast**
220-233					**Reserved (Open)**
234-255					**Open**

DMX CHANNEL	8	Parameter: **ZOOM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Linear Zoom**

DMX CHANNEL	9	Parameter: **BANK**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15					**Bank 1**
16-31					**Bank 2**
32-47					**Bank 3**
48-63					**Bank 4**
64-79					**Bank 5**
80-95					**Bank 6**
96-111					**Bank 7**
112-127					**Bank 8**
128-143					**Bank 9**
144-159					**Bank 10**
160-175					**Bank 11**
176-191					**Bank 12**
192-207					**Bank 13**
208-223					**Bank 14**
224-239					**Bank 15**
240-255					**Bank 16**

DMX CHANNEL	10	Parameter: **INDEX**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15					**Index 1**
16-31					**Index 2**
32-47					**Index 3**
48-63					**Index 4**
64-79					**Index 5**
80-95					**Index 6**
96-111					**Index 7**
112-127					**Index 8**
128-143					**Index 9**
144-159					**Index 10**
160-175					**Index 11**
176-191					**Index 12**
192-207					**Index 13**
208-223					**Index 14**
224-239					**Index 15**
240-255					**Index 16**

DMX CHANNEL	11	Parameter: **RESET**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-239					**No Effect**
240-255					**Total Reset**

18 CHANNELS MODE (DEFAULT)

1 PAN msb 540°
2 PAN lsb
3 TILT msb 270°
4 TILT lsb
5 SPEED MOVEMENT
6 DIMMER
7 SHUTTER
8 ZOOM
9 BANK
10 INDEX
11 ANIMATION SPEED
12 EFFECTS
13 EFFECTS ROTATION
14 X ROTATION/INDEX
15 Y ROTATION/INDEX
16 Z ROTATION/INDEX
17 POINT SPEED
18 RESET

DMX CHANNEL	1	Parameter: **PAN msb**

DMX CHANNEL	2	Parameter: **PAN lsb**

DMX CHANNEL	3	Parameter: **TILT msb**

DMX CHANNEL	4	Parameter: **TILT lsb**

DMX CHANNEL	5	Parameter: **SPEED MOVEMENT**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-25	**18**				**Fast movement**
26-127					**Vector mode from fast to slow**
128-247					**Variable time reaction to DMX signal (fast to slow)**
248-255	**251**				**Slow reaction time to DMX signal**

DMX CHANNEL	6	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	7	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**Black-out**
10-23					**Open**
24-107					**Strobe from Slow to Fast**
108-163					**Pulse open fron Slow to Fast**
164-219					**Pulse closed fron Slow to Fast**
220-233					**Reserved (Open)**
234-255					**Open**

DMX CHANNEL	8	Parameter: **ZOOM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Linear Zoom**

DMX CHANNEL	9	Parameter: **BANK**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15					**Bank 1**
16-31					**Bank 2**
32-47					**Bank 3**
48-63					**Bank 4**
64-79					**Bank 5**
80-95					**Bank 6**
96-111					**Bank 7**
112-127					**Bank 8**
128-143					**Bank 9**
144-159					**Bank 10**
160-175					**Bank 11**
176-191					**Bank 12**
192-207					**Bank 13**
208-223					**Bank 14**
224-239					**Bank 15**
240-255					**Bank 16**

DMX CHANNEL	10	Parameter: **INDEX**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15					**Index 1**
16-31					**Index 2**
32-47					**Index 3**
48-63					**Index 4**
64-79					**Index 5**
80-95					**Index 6**
96-111					**Index 7**
112-127					**Index 8**
128-143					**Index 9**
144-159					**Index 10**
160-175					**Index 11**
176-191					**Index 12**
192-207					**Index 13**
208-223					**Index 14**
224-239					**Index 15**
240-255					**Index 16**

DMX CHANNEL	11	Parameter: **ANIMATION SPEED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15			**Default speed (defined in graphic)**		
16-31					**Stop**
32-255					**1 fps to 25 fps**

DMX CHANNEL	12	Parameter: **EFFECT**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15					**Off**
16-31					**Prism**
32-47					**Random position**
48-63					**Random scale**
64-79					**Twingle**
80-97					**Slow drawing**
98-255					**Not used**

DMX CHANNEL	13	Parameter: **EFFECT CONTROL**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 12 = Prism Mode (Dmx range value 16 - 31)					
0-127					**Clockwise rotation with prop. Speed from Fast to Slow**
128					**Stop**
129-255					**Counterclockwise rotation with prop. Speed from Slow to Fast**

IF CHANNEL 12 = Random position, Random scale, Twincle and Slow drawing Mode (Dmx range value 32 - 97)

0-15					**Stop**
16-255					**Speed from Slow to Fast**

DMX CHANNEL	14	Parameter: **X AXIS LASER ROTATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**Clockwise rotation with prop. Speed from Fast to Slow**
128					**Stop**
129-255					**Counterclockwise rotation with prop. Speed from Slow to Fast**

DMX CHANNEL	15	Parameter: **Y AXIS LASER ROTATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**Clockwise rotation with prop. Speed from Fast to Slow**
128					**Stop**
129-255					**Counterclockwise rotation with prop. Speed from Slow to Fast**

DMX CHANNEL	16	Parameter: **Z AXIS LASER ROTATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**Clockwise rotation with prop. Speed from Fast to Slow**
128					**Stop**
129-255					**Counterclockwise rotation with prop. Speed from Slow to Fast**

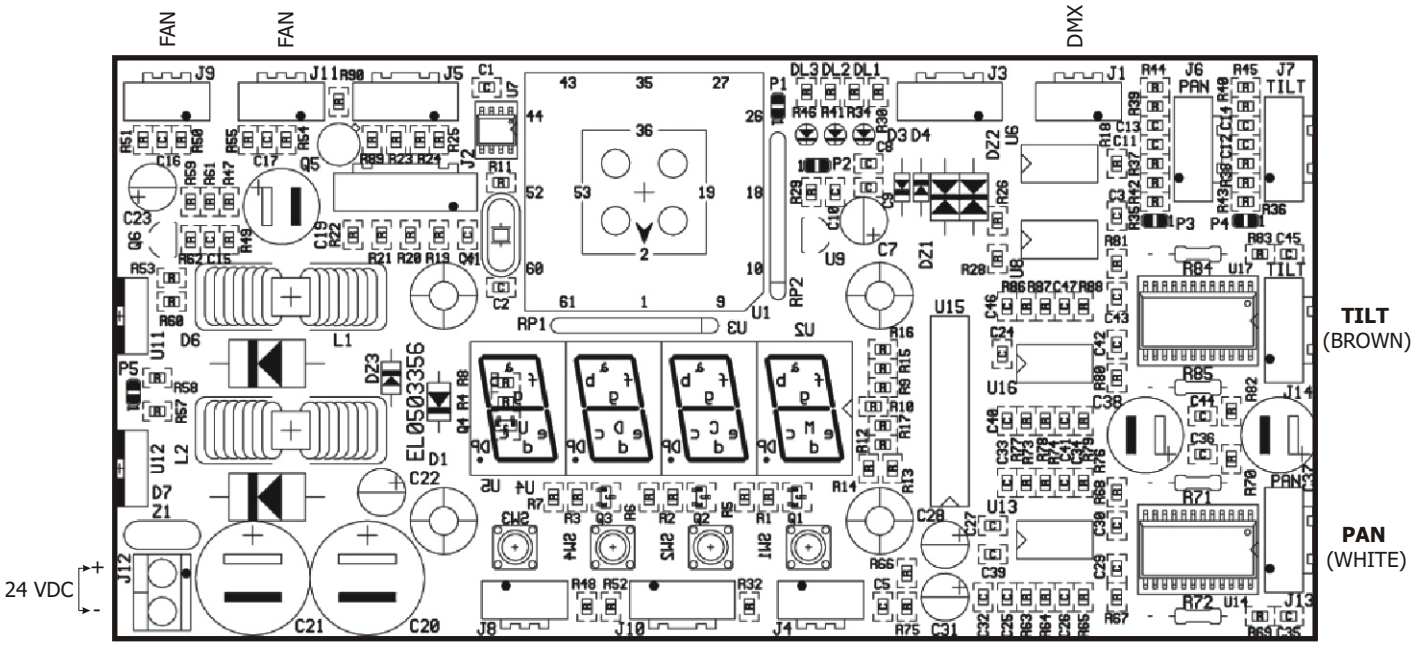
DMX CHANNEL	17	Parameter: **POINT SPEED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15					**Default speed (defined in graphic)**
16-255					**5kps to 30kps (Slow to Fast)**

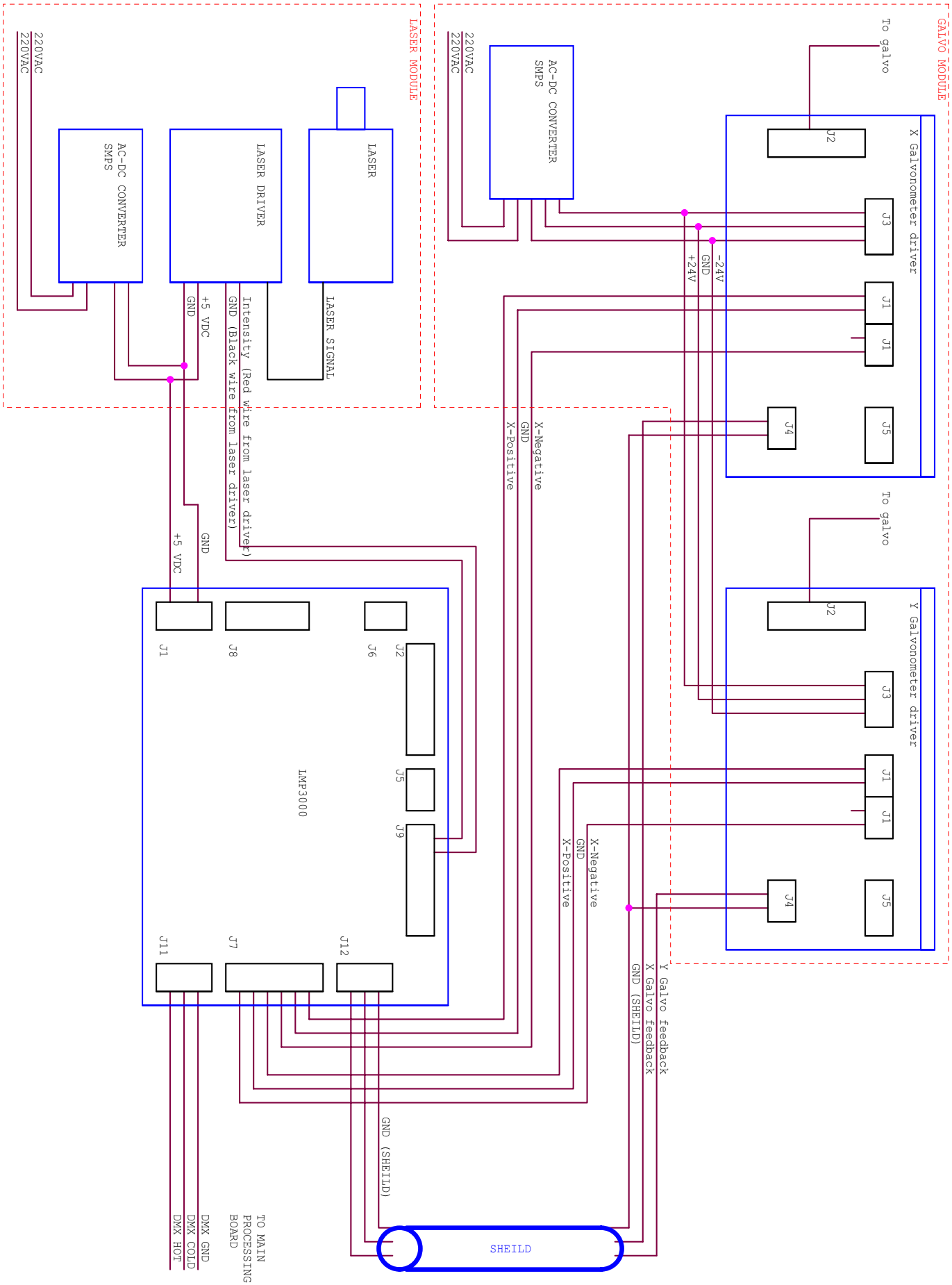
DMX CHANNEL	18	Parameter: **RESET**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-239					**No Effect**
240-255					**Total Reset**

16- DISPLAY + 2 MOTORS CARD



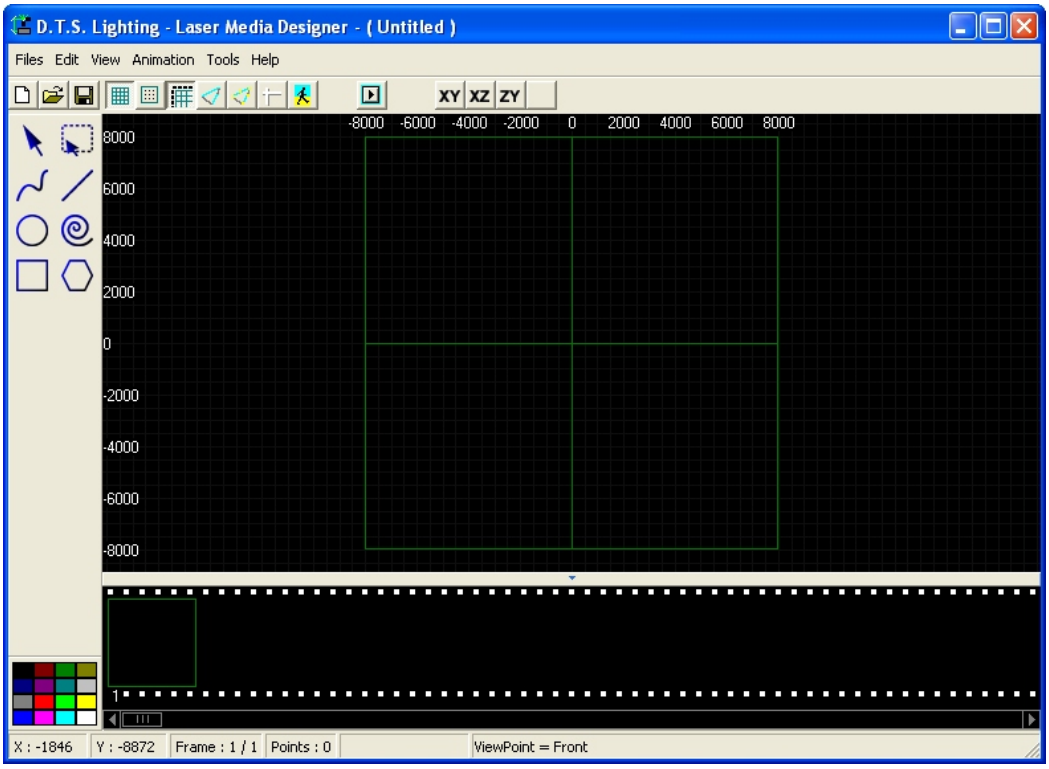
17- WIRING DIAGRAMS



18- LASER MEDIA DESIGNER QUICK STEP GUIDE

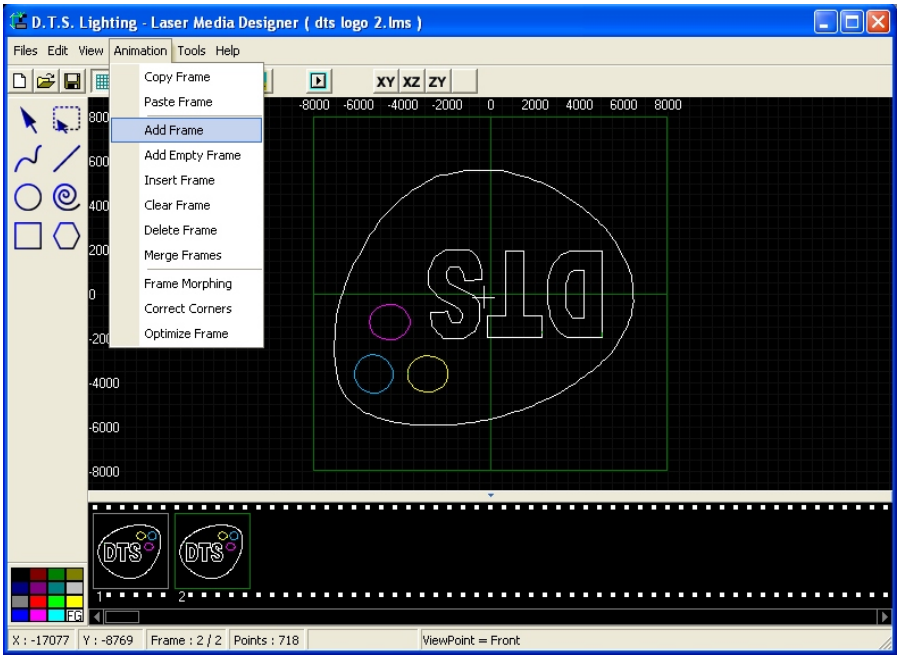
About:
This guide will get you started using the media designer that comes with the XR-LASER GREEN.

Step 1:
Open the software (laser.exe). The software will appear on your desktop.

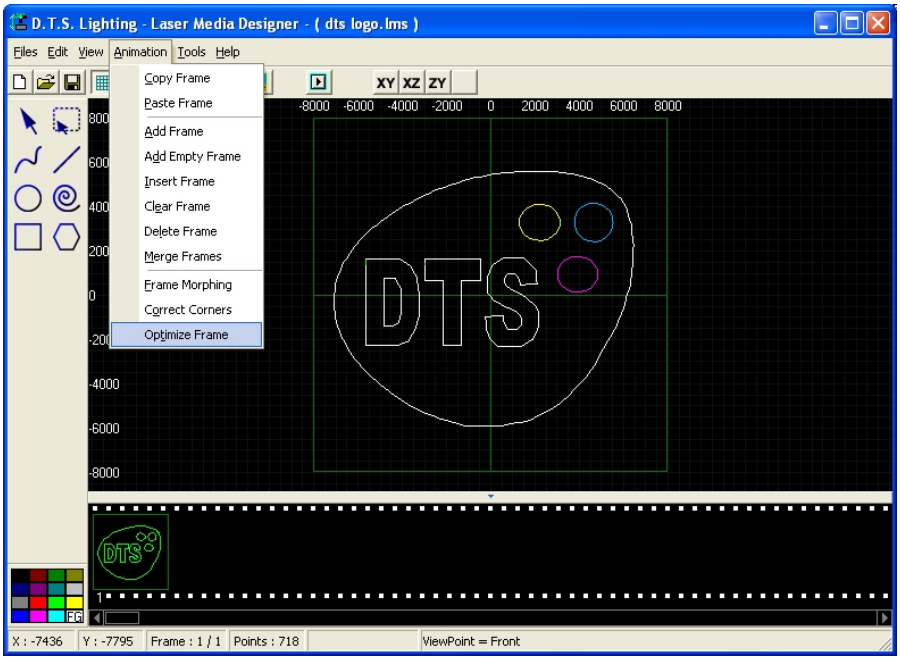


Step 2:
You can now begin your drawing. Use the tools in the left panel or select other tools in the tools menu in the top.

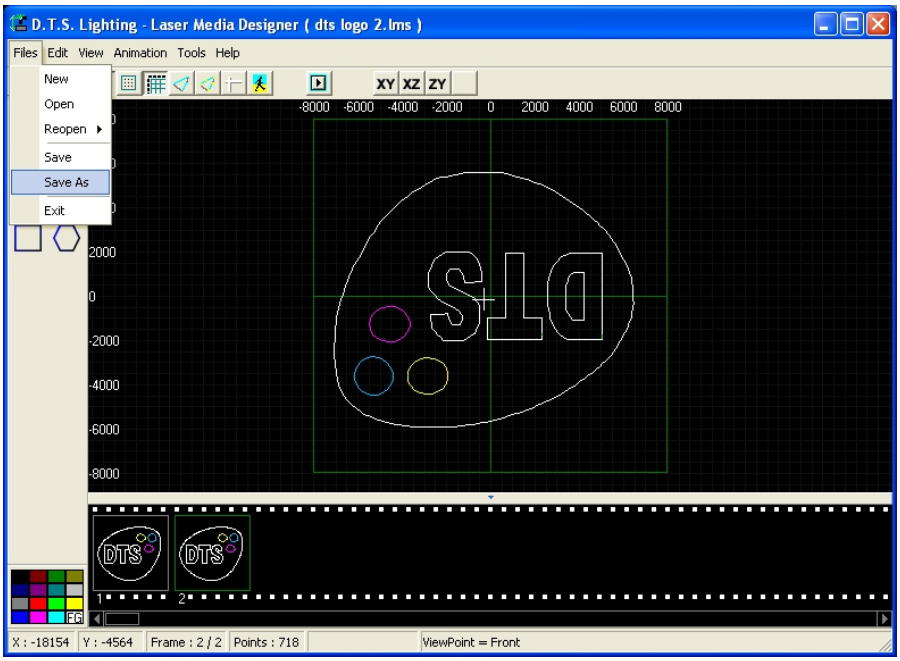
Step 3:
The drawing can have more than one frame. Add more frames to make an animation. Use the "Add frame" or "Add Empty Frame" tool in the Animation menu.


D.T.S. Lighting - Laser Media Designer (dts logo 2.lms)
Files Edit View Animation Tools Help
Copy Frame
Paste Frame
Add Frame
Add Empty Frame
Insert Frame
Clear Frame
Delete Frame
Merge Frames
Frame Morphing
Correct Corners
Optimize Frame
XY XZ ZY
X : -17077 Y : -8769 Frame : 2 / 2 Points : 718 ViewPoint = Front

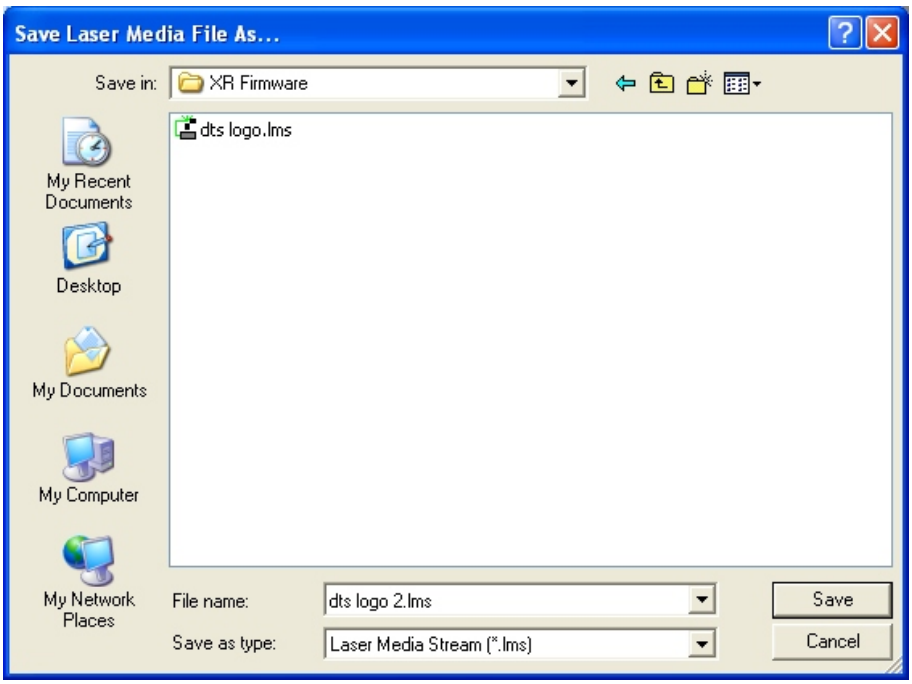
Step 4:
Then you have finished you drawing it has to be optimized. Press the "Optimize Frame" button in the Animation menu. This optimizes the drawing to the XR-LASER GREEN.



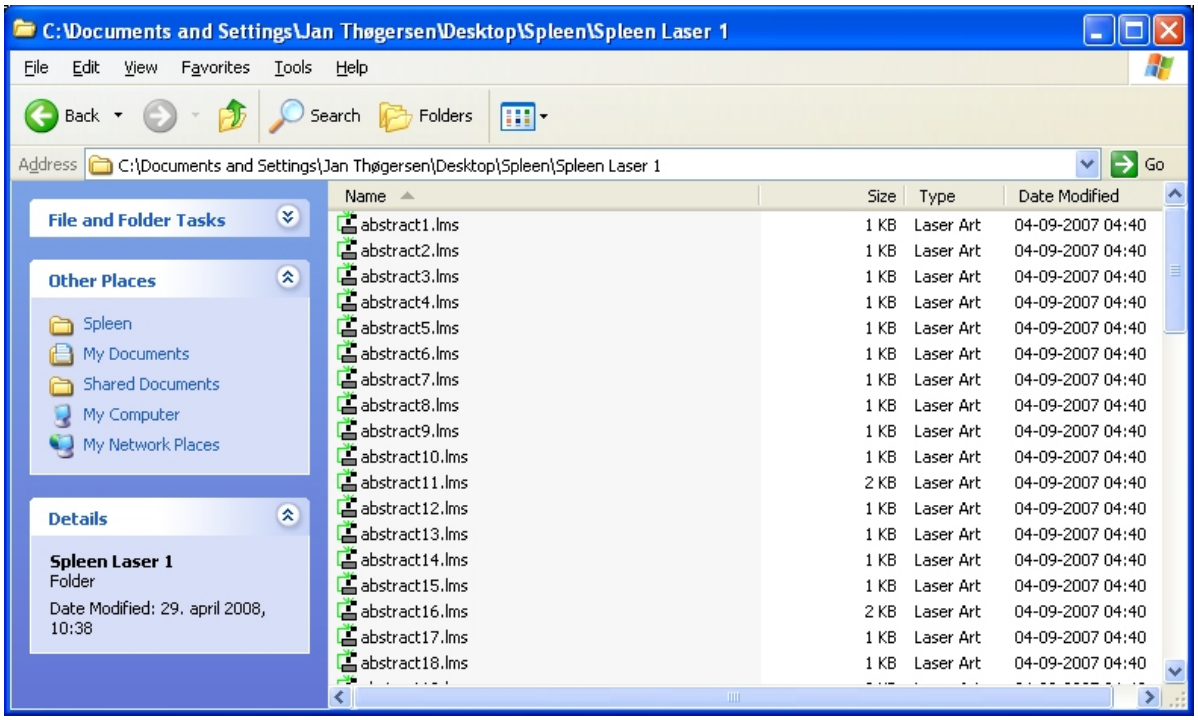
Step 5:
It's now time to save your work. Press the "Save" or "Save as" button in the files menu.


D.T.S. Lighting - Laser Media Designer (dts logo 2.lms)
Files Edit View Animation Tools Help
New
Open
Reopen
Save
Save As
Exit
XY XZ ZY
X : -18154 Y : -4564 Frame : 2 / 2 Points : 718 ViewPoint = Front

Pressing the "Save" will invoke the save dialog. Type a name for the drawing and save it to you harddrive.

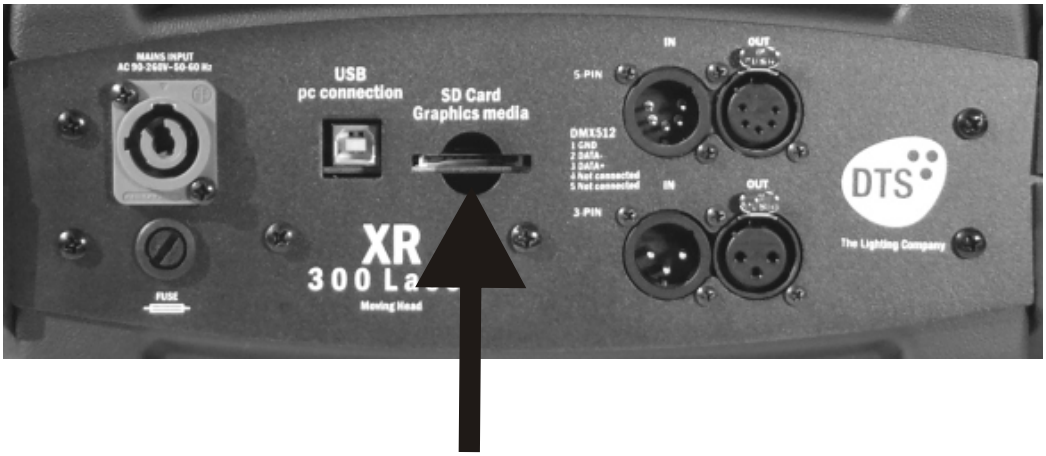


Step 6:
To get the drawing into the XR laser you simply save the drawing on an empty FAT16 or FAT 32 formatted SD card. The XR-LASER GREEN automatic fills the banks and indexes with the files found on the SD card.


C:\Documents and Settings\Jan Thøgersen\Desktop\Spleen\Spleen Laser 1
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Documents and Settings\Jan Thøgersen\Desktop\Spleen\Spleen Laser 1
Go
File and Folder Tasks
Other Places
Spleen
My Documents
Shared Documents
My Computer
My Network Places
Details
Spleen Laser 1
Folder
Date Modified: 29. april 2008, 10:38
Name Size Type Date Modified
abstract1.lms 1 KB Laser Art 04-09-2007 04:40
abstract2.lms 1 KB Laser Art 04-09-2007 04:40
abstract3.lms 1 KB Laser Art 04-09-2007 04:40
abstract4.lms 1 KB Laser Art 04-09-2007 04:40
abstract5.lms 1 KB Laser Art 04-09-2007 04:40
abstract6.lms 1 KB Laser Art 04-09-2007 04:40
abstract7.lms 1 KB Laser Art 04-09-2007 04:40
abstract8.lms 1 KB Laser Art 04-09-2007 04:40
abstract9.lms 1 KB Laser Art 04-09-2007 04:40
abstract10.lms 1 KB Laser Art 04-09-2007 04:40
abstract11.lms 2 KB Laser Art 04-09-2007 04:40
abstract12.lms 1 KB Laser Art 04-09-2007 04:40
abstract13.lms 1 KB Laser Art 04-09-2007 04:40
abstract14.lms 1 KB Laser Art 04-09-2007 04:40
abstract15.lms 1 KB Laser Art 04-09-2007 04:40
abstract16.lms 2 KB Laser Art 04-09-2007 04:40
abstract17.lms 1 KB Laser Art 04-09-2007 04:40
abstract18.lms 1 KB Laser Art 04-09-2007 04:40

You can now insert the SD card into XR-LASER GREEN SD card reader and ran your own created drawings.

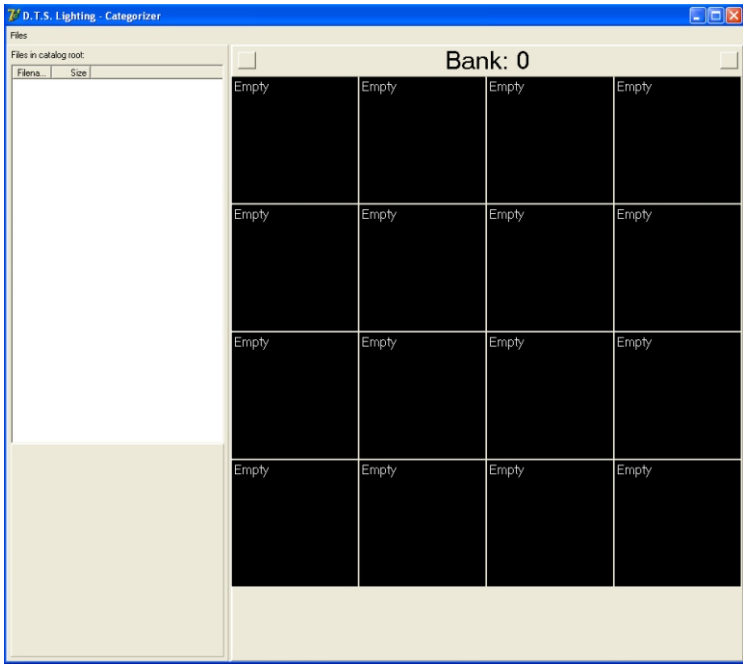
<u>WARNING:</u>
<u>Before inserting or removing the SD card from the card reader switch off the unit</u>



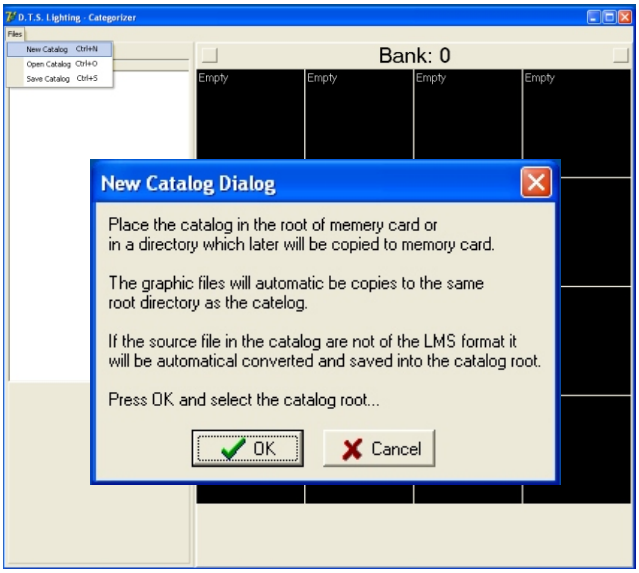
SD CARD READER

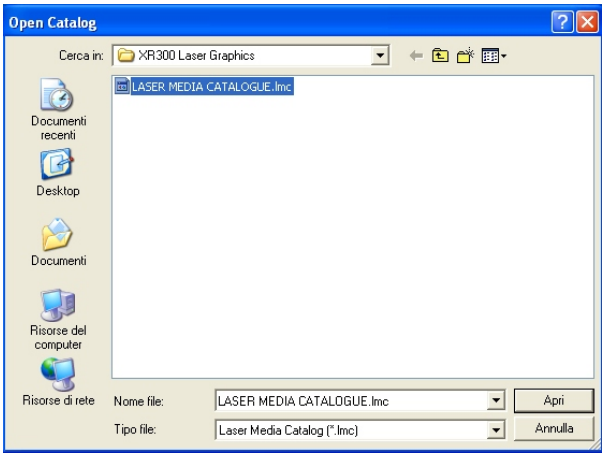
19- SD CARD CATEGORIZER QUICK STEP GUIDE

About:
This guide will get you started using the SD card Categorizer that comes with the XR-LASER GREEN.
This software is usefull to allocate the same drawings sequence (INDEX) in all 16 available BANKS to be stored in different SD card used in different units.
Using this software, it will be possible to have the same drawings in the same bank position on every unit.
Step 1:
Open the software (Categorizer.exe). The software will appear on your desktop.

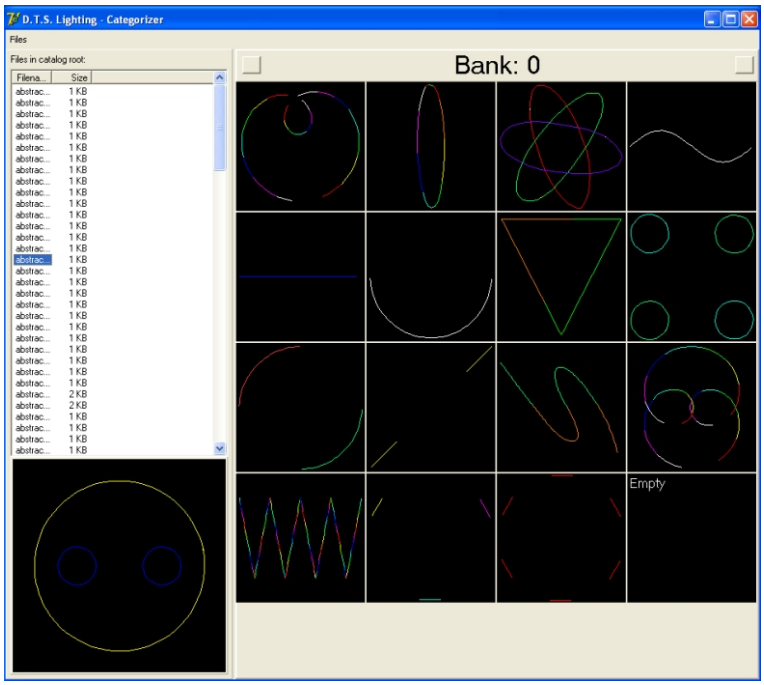


Step 2:
Select ”New Catalog” from Files menu, press ok on the ”New Catalog Dialog window” and select the .lmc file located on your catalog root directory (XR300 laser graphics).

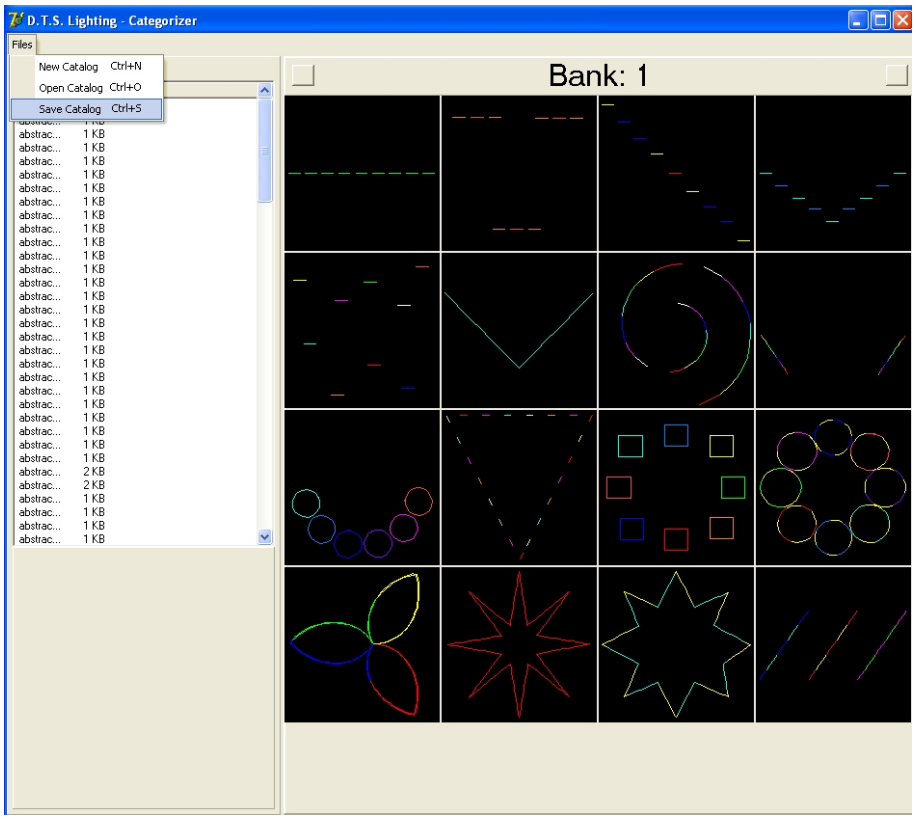

D.T.S. Lighting - Categorizer
Files
New Catalog Ctrl+N
Open Catalog Ctrl+O
Save Catalog Ctrl+S
Bank: 0
Empty
New Catalog Dialog
Place the catalog in the root of memery card or
in a directory which later will be copied to memory card.
The graphic files will automatic be copies to the same
root directory as the catelog.
If the source file in the catalog are not of the LMS format it
will be automatical converted and saved into the catalog root.
Press OK and select the catalog root...
OK
Cancel



Step 3:
Now it's possible to place the drawings (INDEX) in the desired position into the BANKS. (BANK 1-16 available)



Step 4:
At the end of the procedure select "Save Catalog" from the files menu.



Step 5:
To get the drawings into the XR-LASER GREEN you simply save your Catalog on an empty FAT16 or FAT 32 formatted SD card. The XR-LASER GREEN automatic fills the banks and indexes with the files found on the SD card.

NOTES

NOTES

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D.T.S. quality system
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